

MARTIROSYAN, Rafik Balabekovich, kand. tekhn. nauk; KAS'YAN, M.V.,
[REDACTED] NIKOVA, N.I., red izd.; AKHIRYAN, Ye.,
tekhn. red.

[Metal cutting as a process of plastic deformation of compres-
sion and shear] Rezanie metallov kak protsess plasticheskoi de-
formatsii szhatiia i svit'a. Erevan, Armgosizdat, 1963. 115 p.
(MIRA 16:6)

1. Akademiya nauk Armyanskoy SSR (for Kas'yan).
(Metal cutting) (Deformations (Mechanics))

MARTYOSIN, R. I.

Dissertation: -- "On the Spectrum of a Non-Self-Adjoint Differential Operator
Delta u + cu in Unbounded Regions of a Multi-Dimensional Space." Cand. Phys.-Math.
Sci., Mathematics Inst. of V. A. Steklov, Acad. Sci. USSR, N. Jun. 24.
(Vechernaya Moskva, Moscow, 1 Jan 64)

SO: Sum 31st, 23 Dec. 1964

MARTIROSYAN, R.M.

On the spectrum of a self-conjugate differential operator - $\Delta u = cu$
in a three dimensional space. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk
10 no.1:8-11. '57. (MLRA 10:6)

1. Institut matematiki i mekhaniki Akademii nauk Armyanskoy SSR.
(Differential equations) (Spaces, Generalized)

MARTIROSYAN, R.M.

On a biorthogonal system. Dokl. AN Arm. SSR 27 no.1:3-11 '58.
(MIRA 11:9)

1.Institut matematiki i mekhaniki AN ArmSSR. Predstavleno
M.M. Dzhrbashyanom.
(Functions, Orthogonal)

MARTIROSYAN, R.M.

One integral transformation. Dokl. AH Arm. SSR 27 no.2:65-74 '58.
(MIRA 11:10)

1. Institut matematiki i mekhaniki AN Arzamyanskoy SSR. Predstavleno
M.M. Dzhrbashyanom.
(Functional analysis)

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S/044/62/000/003/035/092
C111/C444

24.4107
76.4500

AUTHOR:

Martirosyan, R. M.

TITLE:

On the completeness of the solutions of an integro-differential equation

PERIODICAL:

Referativnyy zhurnal, Matematika, no. 3, 1962, 68, 69
abstract 3B291. ("Dokl. AN Arm SSR, 1959, 28, no. 3,
97-108")

TEXT:

The function system $\{h_n(x)\}$ is called a B-system, if there exists a system $\{H_n(x)\}$ such that the two form a biorthogonal

system:

$$\int_a^b h_n(x) H_m(x) dx = \begin{cases} 1 & \text{for } n = m \\ 0 & \text{for } n \neq m \end{cases}$$

The author takes $a = 0$, $b = \infty$. It is proved: If the sequence of the solutions $\{\varphi(x, \lambda_n)\}$ of the equation

$$\varphi''(x) + (\lambda_n - q(x)) \varphi(x) = 0 \quad (1)$$

forms a complete B-system, then a certain set of the solutions

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$\{\varphi(x, \lambda_n)\}$ of the equation

$$\begin{aligned} & \psi''(x) + (\lambda_n - q(x) - r(x)) \psi(x) + \\ & \quad \int_x^{\infty} T(x, t) \psi(t) dt = 0 \end{aligned} \tag{2}$$

also forms a complete B-system. It is supposed that $q(x)$ is a smooth complex-valued function, while $r(x)$ and $T(x, t)$ are smooth complex-valued and finite functions, $T(x, t)$ being defined on $0 \leq x \leq t$. This is the idea of the proof:

1.) One constructs the one-to-one correspondence

$$\rho(x, \lambda) = \varphi(x, \lambda) + \int_x^{\infty} K(x, t) \varphi(t, \lambda) dt \tag{3}$$

between the solutions of (2) and (1) where $K(x, t)$ is a finite function which is determined from a certain integro-differential equation and an additional condition.

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2.) One constructs the integro-differential equation and an additional condition, both satisfied by the resolvent $R(x, t)$ of (3).

3.) It is proved that the transformation

$$\mu(x, \lambda) = \omega(x, \lambda) - \int_0^x R(t, x) \omega(t, \lambda) dt$$

transforms the solution $\omega(x, \lambda)$ of

$$\omega''(x) + (\lambda - q(x)) \omega(x) = 0 \quad (5)$$

into the solution of the Cauchy problem

$$\begin{aligned} \mu''(x) + (\lambda - q(x) - r(x)) \mu(x) + \int_0^x \overline{r(t, x)} \mu(t) dt &= \\ &= \overline{R_t(0, x)} \omega(0, \lambda) - R(0, x) \omega'(0, \lambda); \quad (6) \\ \mu(0) = \omega(0, \lambda); \quad \mu'(0) = \omega'(0, \lambda) - \frac{\omega(0, \lambda)}{2} \int_0^\infty \overline{r(t)} dt. \end{aligned}$$

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On the completeness of the solutions ...

Then the following basic theorem is proved:

Let the solutions $\varphi(x, \lambda_n)$, $\omega(x, \lambda^* n)$ of the equations (1) and (5) form a complete biorthogonal system in $L_2(0, \infty)$. Let further on be $\mu(x, \lambda_n^*)$ the solution of the Cauchy problem (6), and $\Psi(x, \lambda_n)$ be that solution of (2) which satisfies the condition

$$\lim_{x \rightarrow \infty} |\varphi(x, \lambda_n) - \varphi(x, \lambda_n^*)| = 0. \quad (7)$$

Then the functions

$$\psi(x, \lambda_n), \mu(x, \lambda_n^*) \quad (n = 1, 2, \dots)$$

are square-summable, forming a complete biorthogonal system in $L_2(0, \infty)$.

Note of the referent: 1. The proofs of the existence of a complete biorthogonal system of solutions of (2) and other equations would be far more simple, if the author had used some theorems of N. K. Bari (Biorthogonal'nyye sistemy i bazisy v gil'bertovom prostranstve [Biorthogonal systems and bases in a Hilbert space], Moscow, 1955).

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bases in the Hilbert space] Uch. zap. MGU. Matem. 1951, 4, no. 148).

2. The proof of the basic theorem is not made for all solutions $\Psi(x, \lambda_n)$ of (2), satisfying (7), but for solutions which are representable in the form (3), where $\{\Psi(x, \lambda_n)\}$ is a complete B-system of the solutions of (1). A theorem of N. K. Bari from her mentioned paper should be used here.

Abstracter's note: Complete translation.]

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MARTIROSYAN, R.M.

A generalized problem of Sturm-Liouville. Dokl. AN Arm. SSR 29
no.2:49-58 '59. (MIRA 12:11)

1. Institut matematiki i mekhaniki Akademii nauk Armyanskoy SSR.
Predstavлено академиком AN Armyanskoy SSR M.M. Dzhrbashyanom.
(Functional analysis)

MARTIROSYAN, R.M.

Spectrum of Schrödinger's generalized operator. Dokl. Akad. Nauk. SSR 29 no. 3:97-101 '59. (MIRA 13:2)

1. Institut matematiki i mehaniki AN ArmSSR. Predstavlenie akademikom AN ArmSSR A.L. Shaginyanom.
(Operators (Mathematics))

MARTIROSYAN, R.M.

Spectrum of the operator $-\Delta u + pL u + \int K(Q, P)u(P)dP$ in a plane.
Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 13 no.1:29-45 '60.
(MIR 13:8)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR i
Yerevanskiy Gosudarstvennyy universitet.
(Operators (Mathematics))

S/038/60/024/006/004, -4
C111/C333

AUTHOR: Martirosyan, R.M.

TITLE: On the Spectrum of Some Perturbations of the Laplace Operator in
Multidimensional and Threedimensional Spaces

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1960,
Vol. 24, No. 6, pp. 897-920

TEXT: Let Ω_n be the domain of definition of the hypermaximal operator
 $-\Delta u$, considered in the Hilbert space $L_2(E_n)$ consisting of the functions
defined and square summable over the entire n -dimensional Euclidean E_n .

Assume that the complex-valued function $c(Q)$ is bounded and square summable.
The author considers the nonself-adjoint operator

$$(0.1) \quad Tu = -\Delta u + cu \quad (u \in \Omega_n)$$

the domain of definition of which is identical with Ω_n .

Every eigenfunction of T is continuous, bounded and summable (theorem 2.1).

If $u(Q)$ is eigenfunction of T , then $\Delta u(Q)$ is summable and $\int_{E_n} \Delta u(Q)dQ = 0$

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On the Spectrum of Some Perturbations of the Laplace Operator in Multi-dimensional and Threedimensional Spaces

theorem 2.2). All the points of the positive semiaxis belong to the spectrum of T ; the eigenvalues outside this semiaxis possess no point of accumulation (theorem 2.3).

Theorem 2.4 : Let $n \geq 3$ and for an $\epsilon > 0$ let

$$|c(Q)e^{\epsilon r_Q}| \leq A < \infty , \int_{E_n} |c(Q)e^{\epsilon r_Q}| dQ = B < \infty$$

where r_Q is the distance of the point Q from the origin of coordinates and A,B are certain constants. If n is odd, then the eigenvalues of T possess no finite point of accumulation. If n is even, then the only point of accumulation may eventually lie in Q.

Let $q = \left[\frac{n}{2} \right]$; let L be the positive zero of the function

$$(2.25) \sum_{k=1}^{\infty} \frac{k^2 z^k}{k!} = 1$$

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$$(2.20) \quad \lambda = \sup_{0 < r < \infty} \left\{ -r H_1^{(1)}(ir) \right\} .$$

where $H_1^{(1)}(z)$ is the Hankel function of first kind with index 1 ; let

$$(2.26) \quad \Psi_n(R) = \max \left\{ 1, R^{\frac{n-2}{4}} \right\}$$

Theorem 2.5 says : If the suppositions of theorem 24 are satisfied and if ✓
for even n

$$\lambda^q B < \left(\frac{\epsilon}{4} \right)^{\frac{n-2}{2} q} \frac{L \cdot q! (4\pi)^q \epsilon^2}{8\pi \lambda \Psi_n(R)}$$

and for odd n

$$\lambda^q B < \left(\frac{\epsilon}{4} \right)^{\frac{n-2}{2} q} \frac{L \cdot q! (4\pi)^q \epsilon}{2 \Psi_n(R)} ,$$

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On the Spectrum of Some Perturbations of the Laplace Operator in
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then in the circle, the center of which is in the origin of coordinates and
the radius of which is R, there lie no eigenvalues of T.

Theorem 2.6 : Let $e^{4\epsilon r_Q} |c(Q)| \leq A < \infty$ for an ϵ , $0 < \epsilon < 1$, where A
is a constant. If then $\sqrt{R+1} < \epsilon \left(\frac{\epsilon^2}{A}\right)^{\frac{1}{n-2}}$, then in the circle with
center in the origin and radius R there lie no eigenvalues of T.
In the case $n = 3$ and $c(Q)$ bounded and square summable the author proves:

Theorem 3.1 : Assume that $c(Q)$ satisfies one of the following conditions

for an $\epsilon > 0$: A) $\sup |c(Q)e^{\epsilon r_Q}| < \frac{\epsilon^2}{4}$ or B) $\int_{E_3} |c(Q)|^2 e^{\epsilon r_Q} dQ < 2\pi\epsilon$

Then the entire spectrum of T is continuous and identical with the positive
semiaxis.

Here $\lambda = \lambda_0$ is called a point of the continuous spectrum of a nonself-
adjoint operator T if λ_0 is no eigenvalue of T, and if the operator

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On the Spectrum of Some Perturbations of the Laplace Operator in
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$T - \lambda_0 E$ maps the domain of definition D_T of T onto a manifold dense in
 $L_2(E_3)$ which is not identical with the entire space (see (Ref. 8)).

M.A. Naymark and S.L. Sobolev are mentioned. The author thanks I.M. Gel'fand for the guidance.

There are 9 references : 7 Soviet, 1 American and 1 English.

ASSOCIATION: Institut matematiki i mekhaniki Akademii nauk Armyanskoy SSR (Institute of Mathematics and Mechanics of the Academy of Sciences Armyanskaya SSR)

PRESENTED: by N.N. Bogolyubov, Academician

SUBMITTED: July 17, 1959

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MARTIROSYAN, R. M.

Some perturbations of a Laplace operator in a multi-dimensional space. Dokl. AN Arm. SSR 30 no.1:3-12 '60.
(MIRA 13:7)

1. Institut matematiki i mekhaniki Akademii nauk
Armyanskoy SSR. Predstavлено акад. AN Armyanskoy SSR
M. M. Dzhrbashyanom.
(Operators (Mathematics))

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S/020/60/132/05/06/069

AUTHORS: Dzhrbashyan, M. M. Academician of the Academy of Sciences
 Armenian SSR, Martirosyan, R. M.

TITLE: On the General Theory of Biorthogonal Kernels

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 132, No 5,
 pp. 994-997

TEXT: The paper is a continuation of (Ref.1). There was proved the existence of certain biorthogonal kernels $K(\xi, x)$, $K^*(\xi, x)$ in the Hilbert space $H_k = L_{\mathcal{G}_k}^{2, \ast}(a_k, b_k)$ of all functions which are \mathcal{G}_k measurable and summable in the square on (a_k, b_k) . Now $K(\xi, x)$ is called complete in H_1 , if from $f(x) \in H_1$ and

$$\int_{a_1}^{b_1} K(\xi, x) \overline{f(x)} d\mathcal{G}_1(x) = 0$$

for all $\xi \in (a_2, b_2)$ it follows that $f(x) \equiv 0$. Every complete kernel is called kernel of an isometric operator, if for all $\xi, \gamma \in (a_2, b_2)$ the condition

$$(6) \quad \int_{a_1}^{b_1} \overline{K(\xi, x)} K(\gamma, x) d\mathcal{G}_1(x) = \int_{a_2}^{b_2} e_\xi(x) e_\gamma(x) d\mathcal{G}_2(x)$$

for all $\xi, \gamma \in (a_2, b_2)$

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On the General Theory of Biorthogonal Kernels

is satisfied, where

$$(4) e_{\xi}(x) = \begin{cases} 1, & x \in [0, \xi] \\ 0, & x \notin [0, \xi] \end{cases} \quad \xi > 0, \quad e_{\xi}(x) = \begin{cases} -1, & x \in [\xi, 0] \\ 0, & x \notin [\xi, 0] \end{cases} \quad \xi < 0$$

The function $\tilde{K}(\xi, x)$, $\xi \in (a_2, b_2)$, $x \in (a_1, b_1)$ is called B-kernel, if there is a $\tilde{K}_*(\xi, x)$ such that

$$(1) \quad \tilde{K}(\xi, x) \in H_1, \quad \tilde{K}_*(\xi, x) \in H_2,$$

$$(5) \quad \int_{a_1}^{b_1} \tilde{K}(\xi, x) \tilde{K}_*(\eta x) d\sigma_1(x) = \int_{a_2}^{b_2} e_{\xi}(x) e_{\eta}(x) d\sigma_2(x)$$

and furthermore that \tilde{K} and \tilde{K}_* are complete. \tilde{K} and \tilde{K}_* are called conjugate kernels. A B-kernel $K(\xi, x)$ is called a Bessel kernel, if to every $f(x) \in H_1$ there corresponds a $g(\xi) \in H_2$ so that for all

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On the General Theory of Biorthogonal Kernels

$\gamma \in (a_2, b_2)$ it holds

$$(7) \int_{a_1}^{b_1} f(x) \overline{K_\eta(\gamma, x)} d\zeta_1(x) = \int_{a_2}^{b_2} g(\xi) \epsilon_\eta(\xi) d\zeta_2(\xi).$$

A B-kernel $K_\eta(\xi, x)$ is called a Hilbert kernel, if to every $g(\xi) \in H_2$ there corresponds an $f(x) \in H_1$, so that

$$(9) \int_{a_1}^{b_1} f(x) \overline{K(\gamma, x)} d\zeta_1(x) = \int_{a_2}^{b_2} g(\xi) \epsilon_\eta(\xi) d\zeta_2(\xi)$$

A B-kernel which is simultaneously Bessel and Hilbert kernel is called a Riesz-Fischer kernel. In 10 theorems the author gives several statements on the introduced kernels, e.g.

Theorem 5: If a B-kernel is a Bessel kernel, then the conjugate kernel is a Hilbert kernel. X

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On the General Theory of Biorthogonal Kernels

Theorem 6: In order that a B-kernel $\tilde{K}(\xi, x)$ be a Bessel kernel, it is necessary and sufficient that there exists a positive bounded Hermitean operator T (defined on H_1) such that for all $\xi \in (a_1, b_2)$ it holds

$$(1) \quad \tilde{K}_*(\xi, x) = T \tilde{K}(\xi, x)$$

N. K. Bari is mentioned in the paper.

There are 5 references: 3 Soviet, 1 Hungarian and 1 American

ASSOCIATION: Institut matematiki i mehaniki Akademii nauk Arm SSR
(Institute of Mathematics and Mechanics AS Armenian SSR)

SUBMITTED: February 20, 1960

Card 4/4

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DZHRBASHYAN, M.M., akademik; MARTIROSYAN, R.M.

Problem of moments and the biorthogonalization of kernels.
Dokl.AN SSSR 132 no.6:1250-1253 Je '60. (MIR 13:6)

1. Institut matematiki i mekhaniki Akademii nauk ArmSSR.
2. Akademiya Nauk ArmSSR (for Dzhrbashyan).
(Mathematical analysis)

MARTIROSYAN, R.M.

Spectrum of some non-self-adjoint operators. Izv. AN Arm.
SSR. Ser. fiz.-mat.nauk 14 no.5:9-19 '61. (MIKA 14:11)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Operators (Mathematics))

SAC
S/038/61/025/006400
B112/B08

164400 164600

AUTHORS: Dzhrbashyan, M. M., and Martirosyan, R. M.

TITLE: Theory of the general kernel transformations

PERIODICAL: Akademiya nauk SSSR. Izvestiya seriya Matematicheskaya
v. 25, no. 6, 1961. 825 - 870

TEXT: A general theory of the linear transformations of Hilbert space
functions $L_{\sigma_1}^2(a_1, b_1)$ into $L_{\sigma_2}^2(a_2, b_2)$ is developed. The indices σ_k
refer to the weight functions $\sigma_k(x)$ that occur in the scalar products

$$(f_1, f_2)_{\sigma_k} = \int_{a_k}^{b_k} f_1(x) f_2(x) d\sigma_k(x)$$

of $H_k = L_{\sigma_k}^2(a_k, b_k)$ ($k = 1, 2$). In particular, the linear (almost) isomorphism

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Theory of the general kernel transformations B112/B108

metric mappings of H_1 onto H_2 are investigated. The theorems derived concern the following types of kernels: Bessel kernels K :

$$\int_{a_1}^{b_1} \tilde{K}(\xi, x) \tilde{K}_*(\eta, x) d\sigma_1(x) = \int_{a_2}^{b_2} e_\xi(u) e_\eta(u) d\sigma_2(u)$$

$$\int_{a_1}^{b_1} f(x) \overline{\tilde{K}_*(\eta, x)} d\sigma_1(x) = \int_{a_2}^{b_2} g(u) \overline{e_\eta(u)} d\sigma_2(u)$$

where \tilde{K}_* is bicontinuously conjugate to K

$$e_\xi(x) = \begin{cases} 1 & x \in [0, \xi] \\ 0 & x \notin [0, \xi] \end{cases} \quad \xi > 0$$

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Theory of the general kernel transformations B1*2/B1*08

$$e_{\xi}(x) = \begin{cases} 1 & x \in [\xi, 0], \\ 0 & x \notin [\xi, 0] \end{cases} \quad \xi < 0.$$

and g is the transform of f Hilbert kernels K_* :

$$\int_{\Omega_1}^{\Omega_2} f(x) K(\eta, x) d\sigma_1(x) = \int_{\Omega_2}^{\Omega_1} g(u) e_{\eta}(u) d\sigma_2(u).$$

Formula (1.7) means that $f(x) \rightarrow g(u)$, formula (1.8) that $g(u) \rightarrow f(x)$
Riss kernels: (1.6), (1.7).

$$\int_{\Omega_1}^{\Omega_2} f(x) \tilde{K}(\eta, x) d\sigma_1(x) = \int_{\Omega_2}^{\Omega_1} g^*(u) e_{\eta}(u) d\sigma_2(u).$$

and

$$\int_{\Omega_1}^{\Omega_2} f(x) e_{\xi}(x) d\sigma_1(x) = \int_{\Omega_2}^{\Omega_1} g(u) \tilde{H}_*(\xi - u) d\sigma_2(u).$$

Card 3/4

Theory of kernels of linear integral operators. 1968

($f \rightarrow g$). The relationship of such kernels with the kernels of linear mappings is investigated. Necessary and sufficient conditions for the solvability of the general problem of moments in the spaces H and \mathcal{H} are derived. The results obtained are generalisations of the well known results of N. K. Bari which concern the kernels of biorthogonal transformations (Doklady Ak. nauk SSSR 54 (1946) 787 - 790; ibidem vyp. 148, t. IV (1951) 69 - 107; Doklady Ak. nauk SSSR 33 (1942) 342 - 345). There are 11 references: 8 Soviet and 3 non-Soviet, two references to English language publications read as follows: Paley W. and Wiener N. Fourier transforms in the complex domain. Cambridge, Fox C. A composition theorem for generalized unitary transforms. J. Math. Soc. 8 (1957) 366 - 393.

ASSOCIATION: Institut matematiki i mehaniki Ak. nauk Armyanskiv SSR
(Institute of Mathematics and Mechanics of the Academy of Sciences Armyanskaya SSSR)

DEMITTLE Date 10-10-78
Card 4/4

MARTIROSYAN, R.M.

Defect indices and spectrum of some operators. Dokl. AN Arm.
SSR 34 no.2:49-55 '62. (MIRA 15:4)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR. Predstavлено
akademikom AN Armyanskoy SSR M.M.Dzhrbashyanom.
(Operators (Mathematics))

MARTIROSYAN, R.M.

Spectrum of non-self-adjoint perturbations of a biharmonic operator in three-dimensional space. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 16 no.4:3-15 '63. (MIRA 16:8)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.

MARTIROSYAN, R.M.

Spectra of some non-self-adjoint operators. Izv. AN SSSR Ser.
mat. 27 no.3:677-700 My-Je '63. (MIRA 16:6)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR i Yerevanskiy
gosudarstvennyy universitet.
(Operators(Mathematics))

MARTIROSYAN, R.M.

Spectra of certain non-self-adjoint operators. Dokl. AN Arm.
SSR 36 no.3:129-135 '63. (MIRA 16:10)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
Predstavлено академиком AN ArmSSR M.M. Dzhrbashyanom.

ACCESSION NR: AP4018375

S/0120/64/000/001/0106/0109

AUTHOR: Martirosyan, R. M.; Prokhorov, A. M.

TITLE: Quantum paramagnetic amplifier with coupled resonators for decimeter band

SOURCE: Pribory* i tekhnika eksperimenta, no. 1, 1964, 106-109

TOPIC TAGS: amplifier, quantum amplifier, paramagnetic amplifier, two resonator quantum amplifier, decimeter band quantum amplifier, radioastronomy

ABSTRACT: A superconductive-winding solenoid provides a highly stable constant magnetic field (about 2,000 oerst.) and reduces the weight of the amplifier to 10 kg. Both the active (Cr^{3+} in Al_2O_3) and the passive resonators are of a hollow-microstrip type. Experimentally determined characteristics of the above design have shown that the product of gain and bandwidth is 2.5 times higher than that of a one-resonator amplifier. The amplifier is intended for

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radioastronomical application, particularly in studies of monochromatic radiation of galactic hydrogen. Priority is claimed with respect to a similar amplifier described by K. L. Kyhl, et al., in Proc. IRE, 1962, 50, 7, 1608. Orig. art. has: 5 figures, 1 formula, and 1 table.

ASSOCIATION: Fizicheskiy institut AN SSSR (Institute of Physics, AN SSSR)

SUBMITTED: 15Nov62 DATE ACQ: 18Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 003

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Card

L 17807-65 EWT(d)/EWT(i)/EEC(b)-2/EWA(h) Pn-4/Pao-4/Peb/Pi-4/Pj-4 AFWL/
ASD(a)-5/SSD/AFETR/RAEM(a)/ESD(c)/ESD(gs) S/0109/64/009/012/2094/2098
ACCESSION NR: AP5000448

AUTHOR: Martircyan, R. M. : Prokhorov, A. M.

TITLE: Quantum paramagnetic amplifier with active resonators at a 21-cm wave ^B

SOURCE: Radiotekhnika i elektronika, v. 9, no. 12, 1964, 2094-2098

TOPIC TAGS: quantum paramagnetic amplifier, microwave amplifier

ABSTRACT: Experimental data on the characteristics of a quantum paramagnetic amplifier (QPA) operated at 1,420 Mc and having two coupled active paramagnetic-containing resonators is supplied. Two quarter-wave microstrip resonators mounted in a square 17 x 17-mm waveguide were coupled through their end capacitance (design sketch supplied). A 2,000-oer magnetic field was obtained from a superconductive Nb solenoid. Cr³⁺ of 0.04% concentration was used in an Al₂O₃ lattice. As compared with the two-resonator system with an input passive circuit, the QPA has a much higher gain × bandwidth product; the QPA also has

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ACCESSION NR: AP5000448

the advantage in a more stable gain. The QPA characteristics well agree with theoretical calculations. "The authors wish to thank I. B. Matrosov for his help in experimentation." Orig. art. has: 3 figures, 1 formula, and 1 table.

ASSOCIATION: none

SUBMITTED: 19Aug63

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 001

Card 2/2

L 24702-65 EWP(s)/EWT(m)/EWA(h) WH

ACCESSION NR: AP5001825

S/0056/64/047/006/2055/2063

AUTHORS: Nanukova, A. A.; Mavrikyan, R. M.
PUBLISHER: A. M. S. Sychkov et al.

TITLE: Transient processes in three-level radio-frequency masers

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,
no. 6, 1964, 2055-2063

TOPIC TAGS: maser, three level maser, ruby maser, transient state
maser, maser transient effect, paramagnetic maser, rutile maser

ABSTRACT: An investigation is made of transient processes in rf
three-level paramagnetic masers. The investigation to a certain
extent is also applicable to the optical range. The active substances
used were ruby and rutile (TiO_2) doped with Cr^{3+} . The emission from
the ruby and rutile masers was in the 21- and 10-cm ranges, respectively.
The concentration of Cr^{3+} in ruby was 0.03% and in rutile 0.06%,
and both masers operated at a temperature of 4.2K. The experimental
results indicate that the steady-state amplitude is reached after a
series of transient damped oscillations with subsequent exponential

Card 1/3

L 24702-65

ACCESSION NR: AP5001825

attenuation. The differences between the stages of a transient in ruby and rutile masers are discussed. A theoretical analysis of transient processes in masers is carried out on the basis of kinetic equations similar to those used by H. Stazz and G. A. de Mars (Quantum Electronics, Columbia University Press, N. Y., 1960, 530 pp.) but generalized for a three-level maser. A solution of a system of nonlinear equations is obtained as a linear approximation in analytical form. The theoretical computations agree well with the experimental data. The results indicate that in a ruby maser oscillations with amplitude equal to, or higher than, the steady state occur. In the case of large deviations of the population and amplitude from the steady-state values, nonlinear effects are very likely to occur. These, in a ruby maser, cause nonsinusoidal oscillations at the start of a transient; the duration of the first peaks is considerably shorter than the duration of those near the steady-state level, where oscillations approach a sinusoidal form. Orig. art. has: 12 formulas and 4 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics, Academy of Sciences, SSSR)

Card 2/3

L 24702-65

ACCESSION NR: AP5001825

SUBMITTED: 14 May 64

ENCL: 00

SUB CODE: EC

NO REF Sov: 003

OTHER: 013

ATD PRESS, 3167

Card 3/3

ACCESSION NR: AP4041397

S/0020/64/156/006/1326/1328

AUTHOR: Martirosyan, R. M.; Prokhorov, A. M. (Corresponding member AN SSSR);
Sorochenko, R. L.

TITLE: Application of a quantum paramagnetic amplifier in radioastronomy

SOURCE: AN SSSR. Doklady*, v. 156, no. 6, 1964, 1326-1328

TOPIC TAGS: quantum paramagnetic amplifier, radioastronomy, hydrogen line,
radio wave fine structure

ABSTRACT: The quantum paramagnetic amplifier (QPA) (see T. V. Jelley, Microwave
J. #2 (1962)) consists of two coupled resonance circuits of the signal frequency.
It can be used in spectral radioastronomical studies which do not require a broad
transmission band. The authors used this amplifier in connection with the 22-meter
radio telescope of FIAN for observation of the 21-cm radiation of neutral hydrogen.
The active substance is $\text{Al}_2\text{O}_3:\text{Cr}^3$ in a perpendicular orientation of the trigonal
axis with respect to the external magnetic field of 2000 Oe. The general noise
temperature of the system is expressed as a function of the noise temperature of
the components. The results indicate that QPA permits obtaining detailed informa-
tion on the radiation profile (fine structure). Orig. art. has: 3 figures.

Cord 1/2

ACCESSION NR: AP4041397

ASSOCIATION: Fizicheskiy institut im P. N. Lebedeva, Akademii nauk SSSR (Institute of Physics, Academy of Sciences SSSR)

SUBMITTED: 13Jan64 ATD PRESS: 3077 ENCL: 00

SUB CODE: EC, AA NO REF Sov: 003 OTHER: 001

Card 2/2

L 4420-66 FED/EWT(1)/EWA(h) GW/WS-2

ACCESSION NR: AP5022793

UR/0141/65/008/004/0699/0703

539.28.078:523.164

63

61

B

25

AUTHOR: Martirosyan, R. M.; Prokhorov, A. M.; Sorochenko, R. L.

55

55

55

TITLE: Radio spectrometer for 21-cm wavelength with paramagnetic amplifier

SOURCE: IVUZ, Radiofizika, v. 8, no. 4, 1965, 699-703

TOPIC TAGS: radio spectroscope, radio astronomy, quantum device, amplifier stage, paramagnetic ion, hydrogen line, maser

17,55

ABSTRACT: The authors describe a spectrometer intended for the investigation of the hydrogen radio lines, using a paramagnetic amplifier with two coupled 1420-Mc quarter-wave strip resonators. Ruby with 0.04% Cr³⁺ concentration was used as the active medium. An external field of 2000 oe was produced by a superconducting solenoid with winding of pure niobium. The gain of the amplifier when working with a radiometer was 16-18 db at a bandwidth of 7-8 Mc. The gain drift after 30 minutes of operation did not exceed 2-3%. A block diagram of the radio-spectrometer is shown in Fig. 1 of the Enclosure. Modulation was by switching the input of the paramagnetic amplifier from the antenna to a dummy resistor equal to

Card 1/3

L 4420-66

ACCESSION NR: AP5022793

the wave resistance of the coaxial line. The amplifier was switched to the radiometer circuit with the aid of a circulator with 0.2 and 20 db loss in the forward and backward directions, backed up by a ferrite gate for better decoupling. The stabilization and calibration of the equipment is briefly described. Tests have demonstrated the ability of the apparatus to disclose fine details in the radio line profile. Orig. art. has: 3 figures.

[02]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute,
AN SSSR) 55

SUBMITTED: 30Jul64

ENCL: 01

SUB CODE: NP, AA

NO REF SOV: 005

OTHER: 003

ATD PRESS: 4125

Card 2/3

L 4420-66
ACCESSION NR: AP5022793

ENCLOSURE: 01

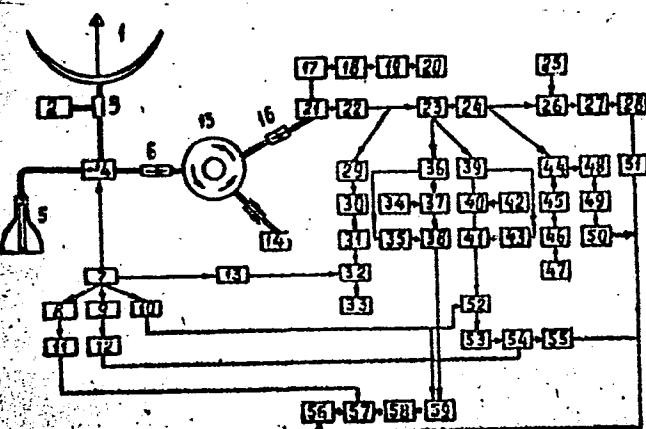


Fig. 1. Radiospectrometer block diagram

1 - Antenna; 2 - noise gen.; 3 - directional coupler; 4 - modulator; 5 - Dewar with dummy load; 6,16 - ferrite gates; 7 - modulation freq. gen.; 8,9,13 - phase shifters; 10,11,12 - pulse shapers; 14 - quant. paramag. ampl.; 15 - circulator; 17 - freq. quadrupler; 18 - 108x freq. multiplier; 19 - buffer; 20 - first heterodyne gen.; 21 - first mixer; 22 - if ampl.; 23 - second mixer; 24 - contin. tuning heterod.; 25 - 1000 kcs timer gen.; 26 - mixer; 27 - 250-kcs ampl.; 28 - detector; 29, 30 - suppl. ampl. and broadband output detector; 31, 32, 33 - modul. freq. ampl., synch. detector, and broadband output recorder; 24, 42 - 3d heterod. of narrow band outputs; 36,39 - 2d if amplif.; 35, 43 - ago; 37, 40 - 3d mixers; 38, 41 - quartz filters; 44 - 10 kcs timing pulse mixer; 45 - harmonics group ampl.; 46 - narrow pulse shaper; 47 - 20 kcs gen.; 48 - 5 kcs ampl.; 49 - detector; 51 - timing relay; 52,59 - narrow band chann. detect.; 53,58 - modul. freq. ampl.; 54, 47 - synch. det.; 55, 56 - narrow band channel recorders.

Card 3/3

L-27223-65: DVG(j)/EWA(k)/FHD/EVT(1)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(x)/EWA(h)/EWA(m)-2
Pr-1/Po-1/Pf-1/Peb/P1-1/P1-1 IJP(c) WG
ACCESSION NR: AP5002897 S/0109/65/010/001/0040/0044

AUTHOR: Karlov, N. V., Martirosyan, R. M., Sorochenko, R. L.

TITLE: Effect of mismatch of antenna-feeder lines upon the frequency response
of resonator-type quantum paramagnetic amplifiers

SOURCE: Radiotekhnika i elektronika, v. 10, no. 1, 1965, 40-44

TOPIC TAGS: amplifier, quantum paramagnetic amplifier, maser amplifier

ABSTRACT: A theoretical and experimental investigation of the effect of mismatch of input (radio-reception) antenna-feeder channels upon the frequency response of quantum paramagnetic amplifiers (QPA) is reported. Formulas for the gain depending on the degree of mismatch for single- and two-circuit QPA's are developed; curves illustrating the effect of mismatch (various types of deformations) are plotted. A QPA with two active resonators was alternatively connected to differently matched loads; their voltage-standing-wave ratios were

Card 1/2

L-27223-65

ACCESSION NR: AP5002897

1.1 and 1.7. Oscillograms show experimental frequency response curves for various gains and decouplings. At a 20-db gain and a 35-db decoupling, the differences between 1.1 and 1.7 in voltage SWR becomes negligible. Orig. art. has: 6 figures and 9 formulas.

ASSOCIATION: none

SUBMITTED: 19Oct63

ENCL: 00

SUB CODE: EC

NO REF SOV: 003

OTHER: 000

Card 2/2

L-47059-55 EWT(1)/EEC(b)-2/EWA(h) Pm-4/Peb/Pi-4/Pj-4/Pl-4

ACCESSION NR: AP501G099

UR/0109/65/010/004/0673/0675

37

B

AUTHOR: Karlov, N. V.; Martirosyan, R. M.

TITLE: One scheme of quantum paramagnetic amplifier with coupled resonators

SOURCE: Radiotekhnika i elektronika, v. 10, no. 4, 1965, 673-675

TOPIC TAGS: amplifier, quantum amplifier, paramagnetic amplifier

ABSTRACT: Characteristics of a quantum paramagnetic amplifier (OPA) with two parallel resonators are briefly considered on the basis of recently published Western and Soviet data. It is shown that a QPA with two-coupled resonators has the same noise as a single-circuit QPA. In the case of a common transformer primary, the two-parallel-resonator QPA has characteristics similar to those of a two-series-coupled-circuit QPA. Orig. art. has: 1 figure and 7 formulas.

ASSOCIATION: none

SUBMITTED: 19Feb64

ENCL: 00

SUB CODE: EG

NO REF Sov: 006

OTHER: 001

ML
Copy 1/1

L-45748-65 EEC-4/EWG(7)/EWT(1)/EEC(t)/T-11 Pe-5/P1-4/Po-4/Pae-2 GW/
WS-4 UR/0033/65/042/002/0316/0322
ACCESSION NR: AP5010431

AUTHOR: Matveyenko, L.I.; Martirosyan, R.M.; Sorochenko, R.L.

TITLE: Observations of the occultation of the Crab nebula on 16 April 1964

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 2, 1965, 318-322

TOPIC TAGS: Crab nebula, nebula occultation, moon, radio astronomy, lunar radio emission

ABSTRACT: The apparatus and method used for observations of an occultation of the Crab nebula by the moon are described. The observations were made at 3.3, 10 and 21 cm on 16 April 1964 at the radio astronomical station of the Physics Institute, AN SSSR using a telescope with a 22-m parabolic dish. At 3.3 cm the width of the directional pattern at the 3-db level was close to the dimensions of the Crab nebula. Amplitude-modulation radiometers were used. Records of the occultation between the first and second contacts are shown in Fig. 1 of the Enclosure. The occultation curves are greatly distorted due to a change in the contribution of lunar radio emission at 3.3 cm. Fig. 2 of the Enclosure shows occultation curves corrected for the influence of lunar radio emission. The curves for observations at 10 and 21 cm reveal that the curves are smooth and close to one another, with deviations not exceeding 1±2%

Cord 1/6

L 45741-65
ACCESSION NR: AP5010431

6
of the total flux of radio emission. This means that for these waves there are no regions with a surface brightness equal to double the brightness at the center of the nebula and measuring $0'.25 \times 0'.25$ and $0'.35 \times 0'.35$, respectively. The entry and emergence occultation curves are asymmetrical, indicating an absence of radial symmetry. The nonuniformity of the curves, especially in the region of the second and third contacts, indicates a nonuniform distribution of brightness temperature. The times of the four contacts, determined at the 23-db level, virtually coincide at 10 and 21 cm. The corresponding angular dimensions of the nebula for the 25-db level can be estimated from Fig. 3 of the Enclosure. "The authors express deep appreciation to N.A. Mitreykin, V.I. Pushkarev, N.A. Abrosimova, N.F. Il'in, A.I. Kozlov and Yu.K. Palamarchuk for great assistance in preparing the apparatus and carrying out the observations". Orig. art. has: 5 formulas, 4 figures and 4 tables. [08]

ASSOCIATION: Fizicheskiy institut Akademii nauk SSSR imeni N. Lebedeva (Physics Institute of the Academy of Sciences, SSSR)

NUMBER OF COPIES: 100

ENCLOSURE: 22

NO. FOR REGISTRATION: 510

OPTIONAL FORMS:

SUB CODE: AA

ADU PRESS: 1000

Card 2/5

L 09108-67 EWT(a) IJP(c)
ACC NR: AP7002359

SOURCE CODE: UR/0429/66/001/003/0192/0216

26

AUTHOR: Martirosyan, R. M.

ORG: Institute of Mathematics and Mechanics, AN ArmSSR (Institut matematiki i mekhaniki AN ArmSSR); Yerevan State University (Yerovanskiy gosudarstvennyy universitet)

TITLE: Spectrum of certain non-self-adjoint perturbations of self-adjoint differential operations

SOURCE: AN ArmSSR. Izvestiya. Matematika, v. 1, no. 3, 1966, 192-216

TOPIC TAGS: differential operator, eigenvalue, perturbation

ABSTRACT: The paper offers a simple way for studying the spectrum of "small" perturbations of a class of non-self-adjoint operators with continuous spectra.

This is well illustrated 1) in the case of an arbitrary polynomial $P(\frac{d}{dx})$ of a differential operator with real coefficients and 2) in the case of the polyharmonic operator $(-\Delta)^k$ given in an odd-dimensional ($3 \leq n < 2k$) Euclidean space.

The main result may be worded as follows: when perturbing these operators with a multiplication operator (by a complex-valued function exponentially decreasing at infinity) only a finite number of eigenvalues may arise. Orig. art. has: 2 formulas [JPRS: 38,0006] SUB CODE: 12 / SUBM DATE: 05Mar66 / ORIG REF: 006
Card 1/1 not

0925 0659

SHAKARYAN, G.A.; NURAZYAN, A.G.; NAVASARDYAN, A.A.; OGANESYAN, M.A.;
MARTIROSYAN, R.Z.

Effect of antibiotics on the formation of antibodies in immunizing
sheep with brucellosis vaccine. Izv. AN Arm. SSR. Biol. nauki
17 no.2:47-54 F '64. (MIRA 17:8)

1. Kafedra mikrobiologii Yerevanskogo zooveterinarnogo
instituta.

ACCESSION NR: AP4021554

S/0298/64/017/002/0055/0062

AUTHOR: Shakaryan, G. A.; Nurazyan, A. G.; Navasardyan, A. A.;
Oganesyan, M. A.; Martirosyan, R. Z.

TITLE: Effect of antibiotics on antibody production in sheep
immunized with Brucella vaccine

SOURCE: AN ArmSSR. Izv. Biologicheskiye nauki, v. 17, no. 2, 1964,
55-62

TOPIC TAGS: antibiotic effect, antibody production, Brucella
vaccine immunization, penicillin, streptomycin, biomycin, monomycin,
agglutination reaction, fixation of complement

ABSTRACT: Six groups of sheep (10 each) were immunized with single
subcutaneous injections of Brucella live vaccine (strain No. 19,
series No. 1803). Penicillin, streptomycin, biomycin, monomycin, and
monomycin combined with penicillin were administered twice the first
day and twice daily the six subsequent days to 5 groups, with the
sixth group serving as a control. Animal blood was tested before
immunization for agglutination reaction and fixation of complement

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ACCESSION NR: AP4021554

and after immunization was tested every 7 days for a 42 day period. Results show that penicillin does not depress the production of agglutinins or complement fixation antibodies. Agglutinin production is slightly depressed by streptomycin and monomycin combined with penicillin, and is sharply depressed by biomycin and monomycin. Production of complement fixation antibodies is also depressed by biomycin, streptomycin, and especially by monomycin. Orig. art. has: 2 figures.

ASSOCIATION: Kafedra mikrobiologii Yerevanskogo zooveterinarskogo instituta (Microbiology Department of the Erevan Zooveterinary Institute)

SUBMITTED: 25Sep63

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: LS

NR REF SOV: 028

OTHER: 000

Card 2/2

MARTIROSYAN, S.N.

Some new species of fungi from the genus *Tyromyces* Karst.
in the Armenian S.S.R. Izv. AN Arm. SSR. Biol. nauki 16
no.12:65-74 D '63. (MIRA 17.2)

I. Kafedra botaniki Yerevanskogo gosudarstvennogo universi-
teta.

MARTIROSYAN, S.N.

Materials on the study of the representatives of bracket fungi
of the genus Phellinus Quel in the Armenian S.S.R. Izv. AN Arm.
SSR. Biol. nauki 17 no.4:77-87 Ap '64. (MIRA 17:6)

1. Kafedra botaniki Yerevanskogo gosudarstvennogo universiteta.

MARTIROSYAN, S. N.

Materials on the study of Rhipsalis sp. in Armenia, p. 1-10.
Izv. AN Arm. SSR. Biol. nauki 18 (1): 12-14. P. 1-10.

1. Kafedra botaniki biologicheskogo fakulteta im. V. G. posudarstvennogo universiteta.

17(2)

SOV/16-53-1-54/47

AUTHOR: Aslanyan, G.G. and Martirosyan, S.P.

TITLE: Comparative Data on the Changes in the Body Reactivity Under the Effect of Normal and Immune Blood Transfusions. Author's Summary

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1959, № 9, pp 128 (USSR)

ABSTRACT: The authors investigated the physical response to transfusions of immune and normal blood for a comparative appraisal of the two methods. The tests showed that the non-specific body reactivity, which was in most cases markedly changed before the start of treatment, returned almost to normal after double immune blood transfusion. The patients who received normal blood, however, showed only a slight shift towards normalization, and that not always. In brucellosis patients, immune blood transfusion was leading to considerably more positive changes in the body reactivity, particularly specific reactivity (deallergization, stimulation of immunogenesis), and to a greater rise in the function of the immunological defense mechanisms, to the

Card 1/2

SOV/16-59-9-34/47

Comparative Data on the Changes in the Body Reactivity Under the Effect of Normal and Immune Blood Transfusions. Author's Summary

adaptive trophic function of the sympathetic nervous system and to the functional state of the reticulo-endothelial system than did normal blood when used for the transfusion. Immune blood also had a more therapeutic effect.

ASSOCIATION: Arapanskoye rayonnoye meditsinskoye ob'yedineniye Armyanskoy SSR (Medical Federation of the Armenian SSR of Arapan District

SUBMITTED: June 28, 1958

Card 2/2

MARTINIQUE, T.; SINGAPORE, . .

Demurrage of the fleet in port and related costs while
waiting for the arrival of the fuel. P. M. 1000 hrs.:
S-1 Ag. 196.

1. Zametit. "nachal'nik" (radioactive) - 1000 hrs. 196.
2. Zametit. "nachal'nik" (radioactive) - more, later or earlier if possible.

MARTIROSYAN, V.

USR/Chemistry - 2-Butene, 1, β -Dichloro
Chemistry - Chlorination

Feb 1948

"Preparation of Hexachloroethane and Carbon Tetrachloride From 1, β -Dichloro-2-Butene,"
A. N. Akopyan, G. T. Emayan, V. Martirosyan, Cent Sci Res Lab, Works imeni . M. Kirov,
41 pp

"Zhur Prik Khim" Vol XXI, No 2

Destructive chlorination of 1, β -dichloro-2-butene, formed as a by-product of hydrochlorination of monovinylacetylene to chloroprene, was carried out in the presence of activitated carbon at 450°C at rates of flow of chloride of 20-22 l/hr and dichlorobutene of 5.0-5.7 g/hr (20% excess chlorine) and gave an average of 73%, and up to 80%, theoretical yields of products, among them about 75% hexachloroethane and the rest carbon tetrachloride. Increase of temperature of 600° probably would raise the yield of carbon tetrachloride.

Submitted 11 Jan 1947

PA 64T9

MARTIROSYAN, V.B.

Introduction of the industrial prospecting method in the Mzineneskoye
gas field. Gaz.prom. no.5-3-11 63. (MIRA 15 c)
(Stavropol Territory--Gas, Natural)

ABDULIN, F.S.; MARTIROSYAN, V.B.

Determining the location of the parted casing of a producing
string using a flow meter. Nefteprom. delo no. 7:37-39 '64.
(MIRA 17:8)

1. Stavropol'skiy filial Groznenskogo neftyanogo nauchno-
issledovatel'skogo instituta.

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032610009-9

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032610009-9"

MARTIROSYAN, V.V.

Subacute duodenal ulcer in papilloma of the vascular plexus of the
fourth ventricle. Vop.neirokhir. 20 no.5:48 S-0 '56. (MLRA 9:11)

1. Is kliniki nervnykh bolezney i neyrokhirurgii Rostovskogo
gosudarstvennogo meditsinskogo instituta.

(PEPTIC ULCER, complications,

papilloma of fourth ventric. (Rus))

(PAPILLOMA, complications,

fourth ventric. papilloma with peptic ulcer (Rus))

(BRAIN NEOPLASMS, complications,

papilloma of fourth ventric. with peptic ulcer (Rus))

MARTIROSYAN, V.V.

MARTIROSYAN, V. V., Cand Med Sci -- (diss) "An experiment ⁱⁿ the
clinical study of ^{cerebral} ~~encephalic~~ metabolism during intra-
cranial neoplasm." Rostov-on-Don, 1958. 16 pp. (Rostov-on-Don ^{54.4}
Med Inst), 200 copies. (KL, 9-58, 123)

- 140 -

MARTIROSYAN, V.V., ZHANPOLATY V., V.P.

Acetone bodies in the blood and cerebrospinal fluid in various diseases of the central nervous system. Vrach.delo no.5:499-511
(MIRA 11:7)
By '58

1. Klinika nervnykh bolezney i neyrokhirurgii (zav. prof. V.A.
Nikol'skiy) i klinika probedevtiki vnutrennykh bolezney
(zav. + prof. B.N. Mikhaylov) Rostovskogo meditsinskogo instituta.

(KETONES)

(BLOOD--ANALYSIS AND CHEMISTRY)

(CEREBROSPINAL FLUID--ANALYSIS)

VORONKINA, Ye.P.; MARTIROSYAN, V.V.

Recklinghausen's central neurofibromatosis. Vop.neurokhir. 22
no.6:39-40 N-D '58. (MIRA 12:2)

1. Klinika nervnykh bolezney i neyrokhirurgii Rostovskogo-na-Donu
meditsinskogo instituta.
(NEUROFIBROMATOSIS, case reports,
brain (Rus))
(BRAIN, neoplasms
neurofibromatosis (Rus))

NIKL'SKIY, V.A., MARTIROSYAN, V.V., TEMIROV, E.S.

Carbohydrate metabolism in the brain and muscles in brain tumors.
[with summary in French]. Zhur. nevr. i psich. 58 no.5:56-566
'56 (MIRA 1:?)

1. Klinika nervnykh bolezney i nevrokhirurgii (zav. kafedroy - prof.
V.A. Nikl'skiy) Nekrovnogo-na-Donu meditsinskogo instituta.
MUSCLES, metabolism,
carbohydrates, in brain tumors (Eng)
(BRAIN, metabolism,
same (Rus))
BRAIN METABOLISM, metabolism
carbohydrates in brain & musc. (Rus))
(CARBS HYDRATE, metabolism
brain & musc., in brain tumors (Rus))

MARTIROSYAN, V.V.; POROSHINA, A.A.

Phenol metabolism in the brain and in the muscles in intracranial neoplasms. Zhur. nevr. i psich 58 no.12:1436-1437 '58. (MIRA 12:1)

1. Klinika nervnykh bolezney i neyrokhirurgii (zav. - prof. V.A. Nikol'skiy) Rostovskogo-na-Donu meditsinskogo instituta.

(PHENOOLS, metab.

brain & musc., in brain tumors (Rus))

(BRAIN NEOPLASMS, metab.

phenols in brain & musc. (Rus))

(MUSCLES, metab.

phenols, in brain tumors (Rus))

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032610009-9

MARTINIQUE, VILLE, RESIDENTS, POLITICAL, MILITARY

GOVT. OF MARTINIQUE, POLITICAL, MILITARY, ETC.

1. TO ESTIMATE INFLUENCE OF MARTINIQUE ON DOMESTIC AND OVERSEAS
INTERNAL AFFAIRS OF FRANCE, AND ON THE POLITICAL POSITION OF
PRO-F.R.A. GROUPS.

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032610009-9"

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032610009-9

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032610009-9"

BENSON, Mikhail Il'ich, inzh.; BEREZIN, Nikolay Tikhonovich,
inzh.; GURNI, Varvara Pavlovna, kand. tekhn.nauk;
LYUBOVSKIY, Grigoriy Abramovich, inzh.; MARTIROSYAN,
Yelena Mikirtychevna; PROGOROVICH, Anna Lazarevna,
kand. tekhn. nauk; SIMONOVA, Irina Mikhaylovna, inzh.;
YEFREMOVA, M.K., red.; GOLOVINA, N.Z., red.; AKSEL'ROD,
I.Sh., tekhn. red.

[English-Russian dictionary of the food industry] Anglo-
russkii slovar' po pishchevoi promyshlennosti. Moskva,
Fizmatgiz, 1963. 570 p. (MIRA 17:1)

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; GRIGORYAN, M.G.; MARTIROSYAN, Yu.O.

5-benzylfuran-2-carboxylic acid. Sint.geterotsikl.soed. no.1:11-13
'56. (MIRA 10:11)

(Furan) (Furoic acid)

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; GRIGORYAN, M.G.; MARTIROSYAN, Yu.O.

3(5'-benzylfuryl-2')-5-mercaptoptriazole-1,2,4. Sint.geterotsikl.
soed. no.1:13-15 '56. (MIRA 10:11)

(Triazole)

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; GRIGORYAN, M.G.; MARTIROSYAN, Yu.O.

5-bromofuran-2-carboxylic acid. Sint.geterotsikl.sosed.no.1:15-17 '56.
(MIRA 10:11)
(Furcic acid)

Martirosyan, Yu. G.

MNDZHOYAN, A.L., akademik; AFRIKYAN, V.G.; BADALYAN, V.Ye.; MARTIROSYAN,
Tu.O.

Investigations in the field of derivatives of p-alkoxybenzoic acid.
Report No.16. Dokl.AN Arm.SSR 27 no.4:243-249 '58.(MIRA 12:1)

1. AN Armyanskoy SSR (for Mndzhoyan). 2. Institut tonkoy organicheskoy
khimii AN Armyanskoy SSR.
(Benzoic acid)

S/0022/64/017/001/0079/0091

ACCESSION NR: AP4026807

AUTHOR: Martirosyan, Z. A.

TITLE: Plane problem of constant profile pressure wave propagation in elastic half-space

SOURCE: AN ArmSSR. Izv. Seriya fiziko-matematicheskikh nauk, v. 17, no. 1, 1964, 79-91

TOPIC TAGS: pressure wave, isotropic elastic half-space, plane-wave equation, stream function, partial separation of variables, Fourier transform, wave propagation, wave packet

ABSTRACT: The propagation of a pressure wave created by an explosion above an isotropic elastic half-space, characterized by constant λ , μ , and ρ_0 , has been considered analytically. It is assumed that on the boundary surface $z = 0$ supports a normal pressure $T_{zz} = -P_1 = \text{const}$. The plane wave equations for the potential ϕ and the stream function ψ are then written $\frac{\partial^2 \phi}{\partial x^2} + \frac{\partial^2 \phi}{\partial z^2} = a^2 \frac{\partial^2 \phi}{\partial t^2}$, $\frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial z^2} = b^2 \frac{\partial^2 \psi}{\partial t^2}$

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under initial conditions

$$\left. \varphi \right|_{t=0} = \frac{\partial \varphi}{\partial t} \Big|_{t=0} = \psi \Big|_{t=0} = \frac{\partial \psi}{\partial t} \Big|_{t=0} = 0$$

and boundary conditions

$$T_{zz} = \mu \left(2 \frac{\partial^2 \varphi}{\partial x \partial z} + \frac{\partial^2 \psi}{\partial x^2} - \frac{\partial^2 \psi}{\partial z^2} \right) \Big|_{z=0} = 0,$$

$$T_{zz} = \left[\lambda \left(\frac{\partial^2 \varphi}{\partial x^2} + \frac{\partial^2 \varphi}{\partial z^2} \right) + 2\mu \left(\frac{\partial^2 \varphi}{\partial z^2} + \frac{\partial^2 \psi}{\partial x \partial z} \right) \right]_{z=0} = \begin{cases} -P_1 & \text{при } |x| < Vt \\ 0 & \text{при } |x| > Vt \end{cases}$$

where V - wave front speed along the surface. The method of partial separation of variables is employed for the solution of the above equations, representing φ and ψ in terms of Fourier transforms. To obtain a qualitative picture of the wave propagation the pressure field is divided into three components $T_{zz} = T_{zzR} + T_{zzM} + T_{zzL}$.

It is shown that T_{zzR} is a function of $x - V_0 t$ and $x + V_0 t$ and that it forms its own wave packet on the surface (or a Rayleigh surface wave) with speed $V_0 = \sqrt{\rho/\mu}$. T_{zzL} forms wave packets of longitudinal and transverse components, the former travelling at velocity $V_1 = 1/a$ and the latter at $V_2 = 1/b$. Orig. art. has: 68 equations and 3 figures.

Cord 2/6; YEREVANSKIY GOSUDARSTVENNY UNIVERSITET (YEREVAN STATE UNIVERSITY)

MARTIROSYAN, Z.T.

Immediate and late results of conservative treatment of peptic ulcer. Sov.med. 22 no.10:30-33 O '58 (MIRA 11:11)

1. Iz Ob'yedinennoy gorodskoy bol'nitsy No.39 (glavnnyy vrach N.A. Gabovskaya, nauchnyy rukovoditel' - deystvitel'nyy chlen AMN SSSR. Ye.M. Tareyev).

(PEPTIC ULCER, ther.

conservative ther., immediate & remote results (Rus))

MARTIROSYAN, Z. T. Cand Med Sci -- (diss) "Immediate and ^{initial} results
of the treatment of ulcer patients ■ by certain methods of conservative therapy."
Mos, 1959. 13 pp (■ 1st Mos Order of Lenin Med Inst im I. M. Sechenov),
200 copies (KL, 52-59, 126)

MARTIROSYAN, Z. T., CAND MED SCI, "Dr. medical.
REMOTE RESULTS OF TREATING ULCER PATIENTS WITH CERTAIN
METHODS OF CONSERVATION ^{ve} THERAPY." Moscow, 1961. (FIRST
MOSCOW ORDER OF LENIN MED INST IM I. M. SECHENOV). (KL,
3-61, 233).

437

MARTIS, N.B.

Corncobs are a valuable raw material for hydrolysis plants. Gidroliz. i
lesokhim. prom. 10 no.8:25-26 '57. (MIRA 10:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'-
fitnospirtovoy promyshlennosti.
(Corncobs) (Hydrolysis)

MARTIS, N.B.

Prospects for the development of the hydrolysis industry in the
Uzbek S.S.R. Gidroliz. i lesokhim. prom. lP-no.2:26-27 '58.

(MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i
sul'fitno-spirtovoy promyshlennosti.

(Uzbekistan--Hydrolysis)

MARTIS, P. A.

Martis, P. A. "A new form of nematode — Oesophagostomum cervi nov. sp. — from pureblooded deer", Sbornik rabot po gel'mintologii (Vsesoyuz. in-t gel'mintologii im. akad. Skryabina), Moscow, 1948, p. 124-27.

SO: U-3042, 11 March 53, (Letopis'nykh Statey, No. 10, 1949).

ANTON, I.; POPA, O.; MARTIS, V.

Cavitation and electric power characteristics of the MHT-1 profile located in turbine nets. Studii tehn Timisoara 9 no.3/4:273-291 Jl-D '62.

MARTIS, R.; SKUTILOVA, L.; TABORSKA, Z.

Tuberculosis of the lungs associated with peptic ulcer.
Bratisl. lek. listy 43 Pt. 2 no. 6-339-343 '63.

1. Krajska nemocnica tuberkulozy a chorob plucnych v Pod.
Biskupiciach, riaditeľ MUDr. K. Virsik.
(PEPTIC ULCER) (TUBERCULOSIS, PULMONARY)
(STATISTICS)

MARTISEK, A.

"Contest for the removal of tree-type soles for strap shoes."

p. 214 (Kozarstvi) Vol. 6, no. 12, Dec. 1956.
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

MARTISEK, A.

"Insoles for welt from thin-soled leather or other materials." P. 339.

KOZARSTVI. (Ministerstvo spotrebniho prumyslu). Praha, Czechoslovakia,
Vol. 8, No. 11, Nov. 1958.

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August 1959.
Uncla.

MARTISEK, Karel, promovany ekonom

Relative cost savings in evaluating the tasks of science and technology. Geol pruzkum 6 no.9:264-265 S '64.

1. Geologicky pruzkum National Enterprise, Brno.

VINOGRADOV, A.P.; DEVIERTS, A.L.; DOBKINA, E.N.; MARKOVA, N.G.; MARTISHCHENKO,
L.G.

Using Cl⁴ to determine absolute age. Report no.1. Geokhimiia no.8;3-9
'56. (MLRA 10:2)

1. Institut geokhimi i analiticheskoy khimii im.V.I. Vernadskogo AN
SSSR, Moskva.
(Radiocarbon dating)

VINOGRADOV, A.P., akademik; DEVIRTS, A.L.; DOBKINA, E.I.; MARKOVA, N.G.;
MARTISHCHENKO, L.G.; MERGASOV, G.G., red. izd-va; POLYAKOVA, T.V.,
tekhn. red.

[Determination of absolute age by C¹⁴ with the help of a
proportional counter; description of the method of construc-
tion and results] Opredelenie absolutnogo vozrasta po C¹⁴ pri
pomoshchi proportsional'nogo schetchika; opisanie metoda kon-
struktsii i rezul'tatov. Moskva, Izd-vo Akad. nauk SSSR, 1961.
(MIRA 14:8)
57 p.

(Geological time)

ACC NR: AP6034526

SOURCE CODE: UR/0016/66/000/010/0117/0120

AUTHOR: Mazurova, L. P.; Martishin, M. Ye.

ORG: Central Scientific Research Institute for Disinfection, Moscow
(Tsentrall'nyy nauchno-issledovatel'stviy dezinfektsionnyy institut)

TITLE: Bactericidal activity of propiolactone fog

SOURCE: Zhurnal mikrobiologii, epidemiologii, i immunobiologii, no. 10,
1966, 117-120

TOPIC TAGS: bactericide, bacteria, propiolactone, E. Coli, S. aureus

ABSTRACT: Propiolactone in a finely dispersed fog ($d_m = 1.3 \mu$) was found to have high bactericidal and sporicidal activity in experiments using a 0.5 m^3 aerosol chamber. *E. coli* was killed on artificially infected surfaces after a five-minute exposure to a 1.5 g/m^3 concentration of propiolactone. *S. aureus* was eliminated by 6 g/m^3 over a two-hr exposure, and 12 g/m^3 for two hr destroyed anthracoid spores.

[EL]
[WA-50; CBE No. 14]

SUB CODE: 06/ SUBM DATE: 28Mar66/ ORIG REF: 006/ OTH REF: 002

Card 1/1

UDC:615.3:547.476.1-014.173-017.77/79

S/129/60/000/012/001/013
E193/E283

AUTHORS: Blanter, M. Ye., Doctor of Technical Sciences,
Koryagin, K. P. and Martishin, O. V., Engineers

TITLE: Low-Carbon Unalloyed Steels as a Substitute for
Certain High-Strength Alloy Steels

PERIODICAL: Metallovedeniye i termicheskaya obrubotka met. llova,
1960, No. 12, pp. 2-7

TEXT: The object of the present investigation was to
explore the possibilities of replacing expensive alloy steels of
the 30XГСА (30KhGSA) type with suitably heat-treated, unalloyed,
low-carbon steels "10" and "15", whose composition is given below.

Steel	Contents of elements in %								
	C	Mn	Si	S	P	Cr	Ni	Cu	Al
10	0.13	0.58	0.27	0.03	0.022	0.07	0.11	0.14	0.053
15	0.16	0.12	0.24	0.032	0.026	0.10	0.13	-	0.026

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S/129/60/000/012/001/013
E193/E283

Low-Carbon Unalloyed Steels as a Substitute for Certain High-Strength Alloy Steels

To this end, the effect of hardening (quenching) temper, temperature of the quenching medium (8-10% aqueous solution of sodium hydroxide), and tempering temperature on the U.T.S., $\sigma_{0.2}$, proof stress ($\sigma_{0.2}$), reduction of area (ϕ), elongation (δ), impact strength (a_k), fatigue strength, and microstructure of these steels, was studied, the mechanical tests having been conducted at temperatures varying between 20 and 500°C (-70 and 500°C in the case of a_k). The following conclusions were reached. (1) Increasing the temperature of the quenching medium from 0 to 50°C, brings about a considerable (approximately 70%) increase in a_k of steels 10 and 15, but does not affect any of the other properties. (2) The best combination of mechanical properties is obtained by quenching from 900-930°C and tempering at 300-350°C. Steel 15, tempered at 300°C, had U.T.S. = 120 kg/mm², $\sigma_{0.2} = 100$ kg/mm², $\delta = 11\%$, $\phi = 38\%$, and $a_k = 11$ kgm/cm². This treatment also lowered the temperature of the ductile-to-brittle transition to below -70°C.

Card 2/3

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E193/E283

Low-Carbon Unalloyed Steels as a Substitute for Certain High-Strength Alloy Steels

(3) The different response of steels studied to various heat treatments is associated with their different carbon and aluminium contents and reflected in the micro-structure of these steels which is finely crystalline in the case of Steel 10, and coarsely crystalline in the case of Steel 15. (4) Hardened and tempered Steels 10 and 15 display best combination of mechanical properties at temperatures above 300°C. (5) Heat-treated Steels 10 and 15 have U.T.S. equal to, and ϕ , δ , and α_k higher than, those of similarly treated steel 30KhGSA. The fatigue limit of hardened Steel 15 amounts to 41 kg/mm² and is 14% lower than that of steel 30KhGSA. (6) Subject to receiving suitable heat treatment, Steels 10 and 15 can be used in many applications as a substitute for high-strength alloy steels. There are 8 figures, 2 tables and 5 Soviet references.

ASSOCIATION: Vsesoyuznyy zaochnyy mashinostroitel'nyy institut
(All-Union Correspondence Institute of Machine Building)

Card 3/3

BLANTER, M.Ye.; KORYAGIN, K.P.; MARTISHIN, C.V.; GALOV, A.G.

Methods for determining the hardness penetration of low
hardenability steels. Zav.lab. 27 no.8:978-980 '61. (MIRA 14:7)

1. Vsesoyuznyy zaochnyy mashinostroitel'nyy institut.
(Steel--Testing) (Hardness)

MARTORIN, V.

Contracting Conference
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no. 8118. 1-3.

LYAPIDEVSKIY, V.K.; MARTISHIN, V.M.

Investigating partial pressure fields in diffusion cloud chambers.
Prib. i tekhn. eksp. no.1:48-49 Ja-F '57. (MLRA 10:6)

1. Moskovskiy inzhenerno-fizicheskiy institut.
(Cloud chamber)

MARTISHVILIS, A. T.: Master Tech Sci. (Diss) - "The computation of the strength of plastic sheets on an elastic base". Kamas, 1959. 11 pp (Min Higher Educ 1959, Faran Polytech Inst), 150 copies (KI, N-12, 1959, 129)